

ATTACHMENT A
Comparison of Claims of '414 to U.S. Patent 5,779,856

| Claims from US '414 | Disclosure in US 5,779,856 |
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| 1. A method for producing pulp, comprising the steps of: providing a fiber material, a transport liquid and an impregnation zone; | The Abstract. Figure 2 and the specification, column 12, lines 41-61 9:54-10:6. Impregnation occurs in conduit 18 and in zone I of vessel 119. |
| providing a digester to facilitate a cooking reaction, the digester having at least one screen girdle section disposed therein, the digester having a first cooking zone and a second cooking zone; | Figure 2: digester 133; screen girdles 152, 154, 156, 40 and 41; first cooking zone II (misabeled I in Figure 2); second cooking zone III. See also column 12, lines 66-column 13, line 43.. |
| providing a total amount of cooking liquor required for the cooking reaction; | Figure 2: "White Liquor" in conduit 49. See also column 11, line 53 and column 12, lines 41-47.. |
| transporting the fiber material and the transport fluid to the impregnation zone; | Figure 2: conduit 18 and vessel 119. See also 9:61-10:4. |
| heating and impregnating the fiber material disposed in the impregnation zone; | Figure 2: vessel 119 and column 12, lines 54-61. |
| transferring the heated and impregnated fiber material from the impregnation zone to the first cooking zone; | Figure 2: via conduit 132 and zone I to cooking zone II (misabeled I). See column 12, line 66-column 13, line 34.. |
| supplying a first portion of the total amount of the cooking liquor to the impregnation zone and the first cooking zone; | Figure 2, white liquor lines 38, 137; column 3, lines 1-6. |
| obtaining a first effective alkali concentration in the first cooking zone; | Figure 2: Though no alkali concentrations are explicitly disclosed for zone II of Figure 2, white liquor is introduced to the circulation associated with this zone via conduit 137 so a "first effective alkali concentration" is inherently established in zone II. |
| passing the fiber material and the cooking liquor through the first cooking zone; and | Figure 2: The downward arrow in zone II (mislabel zone I) clearly illustrate this. |

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| supplying a second portion [No "first portion" is specified.] of the total amount of the cooking liquor to the second cooking zone to obtain a second effective alkali concentration in the second cooking zone, the second alkali concentration being between about 8 grams/liter and about 120 grams/liter greater than the first effective alkali concentration. | <p>Figure 2 and column 13, lines 18-37. This is inherent in the treatment shown in this figure. A high concentration of alkali is introduced to screen 156 via conduits 137 and 155. Some of this alkali passes counter-currently upward to screen 154 as shown by the arrow. This alkali is consumed as the material is treated such that the alkali concentration present in the material and extracted at screen 154 is much lower than that introduced at screen 156. As the material passes screen 156 it is exposed to the higher alkali liquor (25+ or 35+ g/l, column 13, lines 22-25) introduced by conduit 155.</p> <p>As described at column 3, lines 14-19, the spent second stage cooking liquor may have an effective alkali of about 15 g/l. Thus, the alkali concentration of the "second cooking zone" may be at least about 10 to 20 g/l greater than the "first cooking zone." Also, see column 3, lines 1 and 2 and 10, where there is a 15 g/l difference between the zones.</p> |
| 2. The method according to claim 1 wherein the method is a continuous process. | See column 2, lines 60 and 61. |
| 3. The method according to claim 1 wherein the method further comprises the steps of withdrawing a spent liquor from the screen girdle section and transferring the spent liquor to the impregnation zone. | Figure 2: conduits 151 and 135 to vessel 119. |
| 4. The method according to claim 1 wherein the second alkali concentration is at least about 14 grams/liter greater than the first effective alkali concentration. | See above discussion of claim 1. |
| 5. The method according to claim 1 wherein the second alkali concentration is between about 20 grams/liter and about 50 grams/liter greater than the first effective alkali concentration. | See above discussion of claim 1; the difference is between about 15-50 g/l NaOH (compare column 4, line 10 and column 3, lines 2 and 3). |

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| 6. The method according to claim 1 wherein the second alkali concentration is between about 30 grams/liter and about 40 grams/liter greater than the first effective alkali concentration. | Compare column 4, line 10 and column 3, lines 2 and 3. |
| 7. The method according to claim 1 wherein the second effective alkali is between about 14 g/l and about 70 g/l. | It is between 25-60 g/l; see column 4, line 10. |
| 8. The method according to claim 7 wherein the second effective alkali is between about 20 g/l and about 50 g/l. | It is between 25-60 g/l; see column 4, line 10. |
| 9. The method according to claim 1 wherein the first portion is at least 40% of a total amount of effective alkali charged. | Column 3, lines 27-29. |
| 10. The method according to claim 1 wherein the second portion is at least 30% of a total amount of the effective alkali charged. | Column 4, lines 45-47. |
| 11. The method according to claim 1 wherein the first cooking zone is heated to a first temperature and the second cooking zone is heated to a second temperature, the first temperature being greater than the second temperature. | See the treatment temperatures in above TABLE 2. |
| 12. The method according to claim 1 wherein the first temperature is at least 20 C. greater than the second temperature. | See the treatment temperatures in above TABLE 2. |
| 13. The method according to claim 1 wherein the first temperature is between about 150 C. and about 170 C. | See the treatment temperatures in above TABLE 2. |
| 14. The method according to claim 1 wherein the second temperature is between about 130.degree. C. and about 150.degree. C. | See the treatment temperatures in above TABLE 2. |

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| 15. The method according to claim 1 wherein the second cooking zone is a counter-current cooking zone. | Column 10, lines 54-56. |
| 16. The method according to claim 1 wherein the second cooking zone is a concurrent cooking zone. | Column 10, lines 54-56. |
| 17. The method according to claim 16 wherein the second portion is between about 16% and about 100% of a total amount of effective alkali charged. | about 25-90%; see column 3, line 27 and column 10, lines 18-20. |
| 18. The method according to claim 17 wherein the second portion is between about 28% and about 100% of the total amount of effective alkali charged. | about 25-90%; see column 3, line 27 and column 10, lines 18-20. |
| 19. The method according to claim 18 wherein the second portion is between about 40% and about 90% of the total amount of effective alkali charged. | about 25-90%; see column 3, line 27 and column 10, lines 18-20. |
| 20. The method according to claim 1 wherein the first cooking zone has an H-factor that is between about 30% and about 99.5% of a total H-factor required for a pulp formation. | Inherent in the disclosure in view of the comparative temperatures and times in Tables 1 and 2; see attached pages from Grace. |
| 21. The method according to claim 1 wherein the first cooking zone has an H-factor that is between about 50% and about 99% of a total H-factor required for a pulp formation. | Inherent in the disclosure in view of the comparative temperatures and times in Tables 1 and 2; see attached pages from Grace. |
| 22. The method according to claim 1 wherein the first cooking zone has an H-factor that is between about 60% and about 98% of a total H-factor required for a pulp formation. | Inherent in the disclosure in view of the comparative temperatures and times in Tables 1 and 2; see attached pages from Grace. |
| 23. A method for producing pulp, comprising the steps of: providing a total amount of cooking liquor; | Abstract and Figure 2: "White Liquor" in conduit 49. See also column 11, line 53 and column 12, lines 41-47.. |
| providing a digester containing a fiber material to facilitate a cooking reaction; | Figure 2: digester 119. |

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| supplying a first portion of the total amount of the cooking liquor to the digester; | Figure 3: White Liquor via conduits 49, 38, 16, 13, and 18. |
| obtaining a first effective alkali level in the digester; | Inherent in Figure 3. |
| heating the fiber material disposed in the digester to a first temperature; | Figure 3 and column 14, lines 8-10. |
| cooking the fiber material in a first cooking stage to initiate a pulp formation, the first cooking stage having an H factor that is between about 60% and about 98% of a total H-factor required to complete the pulp formation; | Inherent in Figures 2 and 3; and in view of the comparative Tables 1 and 2 above; also see the attached pages from Grace.. |
| completing the first cooking stage; | Inherent in Figure 2, for example, at screen 56 between counter- and co-current treatment. |
| supplying a second portion of the total amount of the cooking liquor to a second cooking stage; | Figure 2: White Liquor via conduits 49 and 137. |
| obtaining a second effective alkali level in the second cooking stage, the second effective alkali level being between about 8 grams per liter and about 60 grams per liter greater than the first effective alkali level; and | See discussion above with respect to claim 1. |
| cooking the fiber material from the first cooking stage at a second temperature until the pulp formation is completed. | Inherent in Figure 2. |
| 24. The method according to claim 23 wherein the method further comprises the steps of withdrawing a spent liquor after the first cooking stage and using the spent liquor to pre-treat the fiber material prior to the second cooking stage. | Figure 2: conduits 151 and 135 to vessel 119. |

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| <p>25. The method according to claim 23 wherein the method further comprises the step of terminating the second cooking stage by introducing a washing liquid into the digester and the washing liquid has a temperature that is lower than the second temperature.</p> | <p>Figure 2: "Wash Liquor" via conduit 42 and column 10, lines 61-65.</p> |
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